

ABSTRACT OF THE DISCLOSURE

A multi-port instruction/data integrated cache which is provided between a parallel processor and a main memory and stores therein a part of instructions and data stored in the main memory has a plurality  
5 of banks, and a plurality of ports including an instruction port unit consisting of at least one instruction port used to access an instruction from the parallel processor and a data port unit consisting of  
10 at least one data port used to access data from the parallel processor. Further, a data width which can be specified to the bank from the instruction port is set larger than a data width which can be specified to the bank from the data port.